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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,455	03/30/2001	Erik Adolfsson	4013-0158P	1414

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EXAMINER

DERRINGTON, JAMES H

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,455

Applicant(s)

ADOLFSSON ET AL.

Examiner

James Derrington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-22 is/are rejected.
- 7) ☒ Claim(s) 10-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hermansson et al (5,306,673) or Heide et al (4,309,488) in view of Sugimura et al (5,096,450).

Hermansson et al discloses the process of encasing a bioactive composite material in glass (Col. 4, lines 4-22) and hot isostatically pressing. The composite material comprises apatite and a ceramic such as alumina, zirconia or titania in the claimed amounts. Because the temperatures and pressures of Hermansson et al are substantially the same of those recited in the claims and shown in the specification (Compare examples at Col. 4 of the reference with temperatures disclosed in the instant examples and dependent claim 7), the reference appears to meet the limitation "before commencing substantial decomposition of apatite phase". With regard to claim 6, it is reasonable to conclude that the composite materials of Hermansson et al are enclosed in the glass at low temperatures, e.g. room temperature, prior to using the hot isostatic pressure and temperature.

Heide et al discloses the process of encasing a bioactive composite material in a mold (Col. 5, line 59 ff) and hot isostatically pressing. The composite material can comprise calcium phosphate and metal, e.g. titanium (Col. 6, line 7). Heide et al disclose that the calcium phosphate and metal can be formed as a composite depicted

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in Fig. 3 and discussed at Col. 4, lines 38-46). It is reasonable to conclude that Heide et al would not have used pressure and temperature conditions that cause substantial decomposition of the apatite phase.

Sugimura et al also disclose a hot isostatic process for preparing composites of metal powder and metal oxides (Col. 3, lines 5-35) following a heating and pressure schedule depicted in Fig. 5. The pressure is increased over time and two different temperatures are used. This process of using a pressure increasing schedule qualifies as a step "applying pressure partially ... before an end temperature" as recited in claim 1. It would have been obvious to use a temperature and pressure increasing schedule with the processes of the primary references for art recognized purposes.

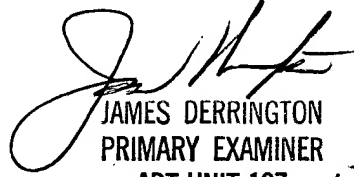
Applicant's arguments have been reviewed; however they are not persuasive for the following reasons. First, it appears that applicant at page 8 is arguing limitations not recited in the claims, e.g. "external pressure should be applied to the capsule before densification begins". Applicant has also maintained that both Hermansson et al and Heide et al only apply pressure at the maximum pressure. The examiner disagrees and submits that the references are silent in regard to the temperature that the pressure is applied in the Hipping processes. However, applicant has indicated that the Sugimura reference sets forth a "conventional" HIP process. The position is maintained taken that it would have been obvious to use this conventional pressure increasing schedule for the HIP processes of the primary references.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Derrington whose telephone number is 703 308-3832. The examiner can normally be reached on 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-7718 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.


JAMES DERRINGTON
PRIMARY EXAMINER
ART UNIT ~~137~~-1731

jd
March 10, 2003